DOCUMENT RESUME

ED 159 337 **CE 016 663**

TITLE	Fire Service Training. Salvage and Overhaul Practices. (Revised).
INSTITUTION	North Carolina State Dept. of Community Colleges, Raleigh.
REPORT NO	FIP-3022
PUB DATE	Jun 74
NOTE	44p.; The manual for this unit is available from International Fire Service Training Association, Fire Protection Publications, Oklahoma State University, Stillwater, Oklahoma 74074 ($3.50); Another manual referenced in the unit, "Motor Fire Apparatus," is available from National Fire Protection Association, 470 Atlantic Avenue, Boston, Massachusetts 02210 (NFPA No. 1901, $4.75); For related documents see CE 016 662-675
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	Course Content; Educational Programs; *Equipment; Fire Protection; *Fire Science Education; Instructional Materials; *Job Skills
IDENTIFIERS	Arson; *Overhaul (Fire Science); *Salvage (Fire Science)

ABSTRACT

One of a set of fourteen instructional outlines for use in a course to train novice firemen' this guide covers the topics of salvage and overhaul practices. In section 1 the techniques for the use and care of salvage equipment are presented. Besides covers, the major types of salvage equipment are arranged in kits according to the specific jobs to be done. Section 2 delineates various operations conducted during overhaul, including searching for and extinguishing hidden fires, determining the causes of the fire, recognizing arson, and obtaining data for the official report. This outline is to be used in conjunction with the International Fire Service Training Association's manual, "Salvage and Overhaul Practices" (see note). (An outline of the whole course covering all fourteen topics briefly is provided in the first volume of the set--CE 016 662.) (ELG)

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FIP 3022

Salvage and Overhaul Practices

FIRE SERVICE TRAINING

SALVAGE AND OVERHAUL PRACTICES

OE 016663

Revised

June, 1974

SALVAGE PRACTICES

Section 1

PURPOSE

A portion of the damage resulting from fires can be attributed to the necessary operations during fire extinguishment, such as the application of water, ventilation activities, and the tracing of fires throughout the structure. These unavoidable procedures cannot be eliminated entirely, but there is a growing tendency among fire departments to extinguish fires in a systematic and scientific manner thus reducing to a minimum damage incidental to fire extinguishment.

A first introduction to salvage work might give the impression that salvage practices during fire fighting consists mainly in spreading salvage covers over merchandise; but there is considerably more to the subject than meets the eye of the casual observer. It is the purpose of this salvage section to present approved operation techniques in the use and care of salvage equipment employed to reduce property damage during any emergency.

This outline was developed to be used in conjunction with the International Fire Service Training Manual, Salvage and Overhaul Practices.

AIM

To develop an understanding of salvage work and an appreciation for equipment used.

COURSE OUTLINE	GUIDES
I. Definition of Salvage - The saving of property, merchandise and effects from any emergency arising from fire, water, smoke, heat, the elements or wreckage.	
II. Responsibility of the Fire Department - Today practically every organized fire department assumes the responsibility of salvage operations. Oftentimes this enables businesses to continue operations with practically no interruption and families continue normal living in their homes a few hours after a fire has occurred.	
III. Responsibility of the Owner.	
A. Most business owners will cooperate by providing protection for their merchandise and stock, if the fire department will inform them of the proper procedures and practices.	
B. Salvage procedures are allied with good maintenance procedures.	
IV. Value in Public Relations.	
A. Community goodwill.	
B. Builds morale and efficiency in firemen.	
V. Salvage Planning.	
A. Salvage should always be considered during pre-planning. Many factors pertinent to proper salvage operations should be considered in a pre-fire plan.	
1. Location of fire.	
2. Area involved.	

COURSE OUTLINE	GUIDES
3. Nature of contents.	
4. Value of contents.	
5. Automatic sprinkler systems.	
6. Personnel available.	
7. Salvage equipment available.	
8. Vertical opening and drains.	
B. Salvage equipment inventory should be considered and checked as is the case with all fire department equipment.	NFPA #19, Motor Fire Apparatus
C. Salvage operations should be included in the training program for all fire personnel.	
VI. Salvage Equipment.	
A. Salvage covers.	
1. Materials used for salvage covers.	
(a) Treated cotton duck.	
(b) Rubber-coated.	
(c) Plastic or plastic-coated synthetics.	
(d) Disposable paper.	
(e) Polyethylene film.	
2. Sizes of covers.	

COURSE OUTLINE	GUIDES

(a) Range in size from 9 x 12 feet to 14 x 18 feet.

(b) Suggested size - 14 x 18 feet size (usually covers average room).

B. Salvage kits.

NOTE: For convenience, salvage work tools are arranged in kits according to the specific jobs to be done. Instructor should explain purpose and use of each.

1. Door, window, or roof repair kits.

(a) Assortment of roofing and masonry nails.

(b) Heavy duty stapling machine and staples.

(c) Adequate supply of roofing paper.

(d) Hammer hatchet.

(e) Linoleum knife.

(f) Small bundle of wood lathe.

(g) Roll of polyethylene plastic.

2. Mop-up kit.

(a) Two mop handles and detachable mop heads.

(b) Two corn brooms.

(c) Two rubber squeegees.

COURSE OUTLINE	GUIDES
(d) Two water buckets or tubs. (e) Water scoops. (f) Auger. 3. Clean-up kit. (a) Four sponges. (b) Two scrub brushes. (c) Two chamois. (d) Assortment of rags. (e) Whisk broom. (f) Odor counteractant. (g) Two buckets. 4. Woodworking tool kit. (a) Cross-cut hand saw. (b) Wrecking bar. (c) Claw hammer. (d) Padlock and hasp. (e) Assortment of nails and screws. (f) Screw drivers. (g) Applicable power tools.	

COURSE OUTLINE	GUIDES
5. Metalworking tool kit.	
(a) Electricians' pliers.	
(b) Hack saw.	
(c) Cold chisel.	
(d) Pipe wrenches.	
(e) Crescent wrench.	
(f) Screw driver.	
(g) Hammer.	
(h) Applicable power tools.	
(i) Hydraulic jack.	
6. Sprinkler kit.	Salvage & Overhaul Practices, Page 21, Figure 8
(a) Sprinkler head wrenches.	
(b) Sprinkler tongs and wedges.	
(c) Assortment of pipe caps and plugs (3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", and 3").	
(d) Pipe wrenches.	
C. Other salvage equipment.	
1. The carry-all and its use.	
(a) A small waterproof carrier or bag.	

COURSE OUTLINE	GUIDES
(1) Made from old or damaged salvage cover. (2) Usually 6 x 8 feet in size. (3) Handles made by sewing or lacing sash cord around edges. (b) Can be used as a mattress carrier or for other debris removal. 2. The floor runner and its use. (a) Can be made from old salvage covers. (b) Roll of polyethylene plastic or vinyl laminated nylon. (c) Size - 30 inches wide and 30 to 40 feet long. (d) Alternates - may use rolls of wrapping paper or newspaper print. (e) Used to prevent damage to floors and floor coverings. 3. Bags of sawdust and their uses. (a) Use white or soft pine sawdust. (1) Will not stain a finished floor. (2) Holds together when wet. (b) Used to take up moisture and to build dykes to route water out of buildings.	

COURSE OUTLINE	GUIDES

4. Water chutes.

   (a) Devices to route water short distances.

   (b) Usually made from old salvage cover.

5. Portable pumps.

   (a) Used to remove water from basements, elevator shafts and sumps.

   (b) Several types of devices can be substituted for portable pumps.

      (1) Eductors.

      (2) Ejectors.

      (3) Jets.

      (4) Siphons.

      (5) Portable water vacuum pump.

      (6) Back pack water vacuum.

VII. Care and Preparation of Salvage Covers.

A. Proper methods for cleaning.

1. Use hose stream.

2. Scrub with broom.

3. If extremely dirty, scrub covers with a washing powder solution. Rinse thoroughly.

4. Keep cover wet until cleaned.

COURSE OUTLINE	GUIDES
B. Proper drying methods. 1. Rinse thoroughly if possible after cover is hung to dry. 2. Dry in well-ventilated place. 3. Have cover dry before folding to prevent mildew and rot. 4. Drying racks may be advisable.	
C. Examining covers. 1. Examine after each use. 2. Three or four men stand side-by-side and pass cover over head looking for holes. 3. Mark any holes with chalk.	Salvage & Overhaul Practices, Page 16, Figure 3
D. Repairing methods. 1. Plastic adhesive tape. 2. Hand sewing. 3. Iron-on patches. 4. Machine sewing. 5. Waterproof glue and piece of salvage cover material. 6. Combinations of above.	

COURSE OUTLINE	GUIDES
E. Placing in service. 1. Salvage covers that have been properly cleaned, dried, examined, and repaired are ready to be folded and placed in service or in stock. 2. Rules for care of covers. (a) Do not throw covers from roofs or windows. (b) Use care when removing covers from sharp projections. (c) Wash and dry as soon as possible after use. (d) When dry, examine for holes and mend before storing. (e) Refold when not used for period of one month. F. Testing salvage covers. 1. Test should be conducted on new and old covers. 2. Lake test. (a) Spread cover out flat. (b) Build a dyke around the edges or roll the edges to form a dyke. (c) Fill basin with water to depth of 5 inches. (d) Allow to stand for 12 hours. No leakage should result.	

COURSE OUTLINE	GUIDES
VIII. Methods of Folding Salvage Covers.	
NOTE: Methods are identified by number of men required to place cover in service, not number of men required to fold cover. When folding, stress neatness and smoothness of appearance.	
A. Two-man salvage cover fold.	Salvage & Overhaul Practices, P. 46, 47, 48, 49, 50, 51, Figure 12
1. Stretch cover lengthwise from center and spread on floor.	
2. With cover spread on floor, make quarter fold by folding open edges over to folded edge.	
3. Fold from open end four times.	
B. One-man salvage cover fold.	Salvage & Overhaul Practices, P. 39, 40, 41, Figure 15
1. Fold half of cover at a time in two lengthwise folds, edge to center.	
2. Fold ends within two inches of center, make three folds from each half of cover.	
3. Fold one half over other half.	
C. One-man salvage cover roll.	Salvage & Overhaul Practices, P. 30, 31, 32, 34, 35, Figure 13
1. Fold lengthwise same as for one-man salvage cover fold.	
2. Fold ends over approximately 12 inches.	
3. Roll from one end to other.	

COURSE OUTLINE	GUIDES

IX. Methods of Spreading Salvage Covers.

A. Spreading from the two-man fold.

1. Rules for carrying.

(a) Either shoulder.

(b) Open edge next to neck.

(c) Four corners in front or in back.

(d) Small ropes through grommets of each pair of corners.

2. To assure teamwork efficiency, department should standardize on.

(a) Shoulder on which to carry cover.

(b) Edge of folded cover placed next to neck.

3. The balloon throw (pocketed air floats cover into position and straightens out folds).

(a) Method of throwing.

(1) Stretch cover along one side of object to be covered.

(2) Drop edge of cover next to object.

(3) Make several accordion folds in the hand that is to make the throw.

COURSE OUTLINE	GUIDES
(4) The other hand is placed about midway down the end hem. (5) Pull cover tight between operators. (6) Swing the folded part down, out, and up in one sweeping motion. (7) The folds may be pitched or carried across the object. (8) Cover is floated over object and guided into position. (b) Completing job. (1) Tuck cover around object. (2) Remove any low areas where water might collect. (3) Arrange so water will drain away from object.	
4. The single-edge snap throw (designed for narrow spaces). (a) Method of throwing. (1) Stretch cover along one side of object to be covered. (2) Drop edge of cover next to object. (3) Bunch outer edge into both hands and dip folded part toward the floor.	Salvage & Overhaul Practices, P. 57, 58, Figure 20

COURSE OUTLINE	GUIDES
(4) Continue in one movement by snapping cover upward. (5) When cover is higher than object, snap folded part from hand across the object. (6) Guide cover into position. (b) Completing the job. (1) Tuck cover around object. (2) Remove any low areas where water might collect. (3) Arrange so water will drain away from object. 5. The double-edge snap throw (for cases when two relatively narrow objects exist on each side of the operators). (a) Method of throwing. (1) Stretch cover between objects to be covered. (2) Bunch or fold both edges of cover into hands, leaving 3 to 4 feet of cover between the hands. (Cover is not touching the floor.) (3) Bring hands together and with a semi-squatting movement dip cover toward the floor.	

COURSE OUTLINE	GUIDES
(4) Continue in one movement by snapping the cover upwards and holding hands together.	
(5) Snap hands outward when cover is above objects to be covered.	
(6) Guide cover over and down object to be covered.	
(b) Completing the job.	
(1) Tuck cover around object.	
(2) Remove any low areas were water might collect.	
(3) Arrange so water will drain away from object.	
6. The crossover throw (one edge of cover crosses the other edge prior to the throw).	Salvage & Overhaul Practices, P. 63, 64, 65, Figure 22
(a) Method of throwing.	
(1) Stretch cover along one side of object to be covered.	
(2) Bunch or roll both edges of cover into hands.	
(3) Man whose right arm is next to object crosses arms.	
(4) From crossed arm position, bring outside fold over the inside fold and cross at the middle.	

COURSE OUTLINE	GUIDES
(5) Pull tightly with left hands and dip cover toward the floor.	
(6) Continue in one movement by pitching cover upward with left hands and toward object with right hands.	
(7) When folds from right hand are over and across object, bring folds in left hand down along side.	
(b) Completing the job.	
(1) Tuck cover around object.	
(2) Remove any low areas where water might collect.	
(3) Arrange so water will drain away from object.	
B. Spreading the one-man fold.	Salvage & Overhaul Practices, P. 42, 43, 44, 45, Fig. 16
1. Carry cover following rules of the two-man fold.	
2. Place cover near center of object to be covered.	
3. Procedures for spreading cover.	
(a) Unfold cover at center fold.	
(b) Unfold each fold one at a time.	

COURSE OUTLINE	GUIDES
(c) Standing at one end, grasp one edge in each hand.	
(d) Snap both hands up and out, opening the cover over end of object.	
(e) Open other end in same manner.	
C. Spreading from the one-man roll.	Salvage & Overhaul Practices, P. 35, 36, 37, 38, Fig. 14
1. Carry cover following rules of two-man fold.	
2. Use of one-man roll.	
(a) Cover objects.	
(b) As a floor runner.	
3. Spreading cover.	
(a) Unroll part of cover at one end of object.	
(b) Place roll on top of object and continue to unroll across the top.	
(c) Grasping one edge in each hand, snap the cover up and out opening it.	
(d) Open other end of cover in same manner.	
X. Arranging Materials to be Covered.	
NOTE: Instructor should point out advantages of fire department inspections.	
A. Arranging merchandise.	

COURSE OUTLINE	GUIDES
1. Skids under perishable stock. 2. Proper shelf construction. 3. When number of covers is limited. (a) Cover most valuable stock first. (b) Use wrapping paper, plastic material when available. B. Arranging residential rooms. 1. Roll rug as furniture is moved. 2. Group furniture for covering. 3. Place clothes, draperies, pictures, etc. on grouped furniture. 4. Place rolled rug across top of furniture. 5. Spread cover. C. Covering shelving. 1. Shelves away from wall. 2. Shelves built to the wall. XI. Removal of Water From Buildings. A. Methods for routing water from buildings. 1. Natural openings - stairways, elevator shafts, scuppers, etc.	

COURSE OUTLINE	GUIDES
2. Cutting holes in floors.	
3. Constructing chutes.	
4. Preparing catch-alls.	
5. Mechanical means.	
(a) Water vacuum for small quantities of water.	
(b) Portable pumps, siphons.	
B. Making chutes.	Salvage & Overhaul Practices, P. 69, Fig. 24, P. 69, Fig. 25
1. With two pike poles.	
2. With ladders.	
3. On stairway.	P. 70, Figure 26
C. Procedures for making catch-alls.	Salvage & Overhaul Practices, P. 71,72 Figure 27
1. With salvage cover spread on floor, roll two sides approximately 3 feet.	
2. Lay ends of rolls over at 90° angle, to form corners.	
3. Roll one end 3 or 4 feet into tight roll, forming a projected ear with which to lock corners.	
4. Roll other end in like manner.	
D. Splicing covers.	Salvage & Overhaul Practices, P. 73, 74 75, Figure 28
1. Fold uppermost cover back on itself about 20 inches and lap underneath cover over this fold about 10 inches.	

COURSE OUTLINE	GUIDES
2. Then fold remaining 10 inches of top cover over underneath cover. 3. Entire fold of both covers is then folded down over bottom cover and pressed flat.	

OVERHAUL PRACTICES

Section 2

PURPOSE AND SCOPE

The purpose of the overhaul section is to present approved techniques of operation conducted during overhaul. The concept that overhaul is nothing more than cleaning up after a fire is incorrect and any fire department that conducts effective overhaul procedures can attest to its value and benefit.

This outline was developed to be used in conjunction with the International Fire Service Training Manual, Salvage and Overhaul Practices.

AIM

To develop an understanding of the problems connected with overhaul and an appreciation for overhaul practices as a separate function from salvage.

COURSE OUTLINE	GUIDES

I. Definition of Overhaul - The search for and extinguishment of hidden or remaining fires; placing the building contents and fire area in a safe condition; determining the cause of the fire; and recognizing and preserving any evidence of arson.

II. Value of Proper Overhaul.

A. Helps locate hidden fires.

B. Helps prevent rekindle.

C. Helps determine the cause.

D. Aids recognizing and preserving evidence of arson.

E. Helps prevent unnecessary damage.

F. Permits removal of original fire cause.

G. Aids in placing the building in safe condition.

H. Helps improve public relations.

III. Overhaul Equipment.

A. Normal fire department tools.

B. Arson kit - for detecting, collecting, protecting, and preservation of evidence of intentional fires and to help determine the cause of the fire.

1. Square of glass.

2. Metal containers.

COURSE OUTLINE	GUIDES
3. Magnifying glass. 4. Large mouth jars. 5. Plastic bags. 6. Sealing tape. 7. Bulb syringe. 8. Envelopes. 9. Scrapers. 10. Bottles. 11. Labels. 12. Flash light. 13. Flash camera. C. Safety kit - material necessary to provide warning. 1. Warning lights. 2. Flares. 3. Signs and notices. 4. Safety light. 5. Rope. 6. Carbon monoxide detector. 7. Combustible gas indicator.	

COURSE OUTLINE	GUIDES

IV. Searching for Hidden Fires.

NOTE: During the search for and extinguishment of hidden fires as well as during the removal of debris from buildings, careful observance should be made for any possible evidence of incendiarism.

A. Determine condition of building in the area to be searched.

1. Structural damage caused by fire.

2. Additional weight on floors and walls resulting from fire extinguishment.

(a) Absorbent qualities of stock.

(b) High expansion materials.

3. Trace the path of fire.

B. Concealed spaces.

1. Walls and partitions.

2. Attics and cocklofts.

3. Above ceilings (false ceilings).

4. Below floors.

5. Basements.

6. Air shafts and ducts.

7. Window and door casings.

8. Cornices.

COURSE OUTLINE	GUIDES
C. Fires under debris and around merchandise. 1. Absorbent materials - paper, wool, cotton, and insulation. 2. Areas beneath fallen debris. V. Extinguishment Hidden Fires. A. Rules for self-protection. 1. Wear full protective clothing. 2. Metal insoles inside boots. 3. Gloves and goggles. B. Extinguishing mediums. 1. If pumpers are returned to station, at least one 2 1/2 inch hydrant line should be connected for standby. 2. Charged hose lines - booster lines and garden hose are ideal for extinguishment during overhaul. 3. Buckets and/or tubs for dunking small objects. 4. Use carry-all as a vat for dunking larger furnishings. 5. Move large furnishings outside for complete extinguishing. 6. Wetting agents.	

COURSE OUTLINE	GUIDES
VI. Determining the Cause of the Fire.	
NOTE: Use example of fire triangle to help firemen recognize fire hazards and determine fire causes.	
A. Three conditions must be present before burning will take place - fuel, oxygen and heat.	Salvage & Overhaul Practices, P. 90
B. Fire hazard - a condition that will encourage a fire start.	
C. Fire cause - a condition resulting when a heat source hazard and a fuel supply hazard are permitted to come together in a proper proportion in the presence of oxygen.	
1. Fire cause always involves fuel supply.	
2. Fire cause always involves heat or ignition source.	
D. System of survey for determining the cause of a fire.	Salvage & Overhaul Practices, P. 87, 88, 89, 92, 93, 94
1. General facts of the situation.	
(a) Address.	
(b) Date and time of fire.	
(c) Weather conditions.	
(d) Occupancy of building.	
(e) Material of construction.	

COURSE OUTLINE	GUIDES
2. Locating area of origin. (a) Section of structure damaged. (b) Section damaged by. (1) Fire. (2) Heat. (3) Explosion. (c) Highest point of fire travel. (d) Physical state of fuel burned. (e) Fire travel through openings. (f) Heat transfer by. (g) Burn through points. (h) Heat indications - location of the greatest. (1) Depth of char. (2) Heat intensity. (3) Spalled building materials. (4) Burning. (5) Heat line location. (6) Location of area of origin.	

COURSE OUTLINE	GUIDES
3. Locating point of origin. (a) Factors to consider. (1) Occupants opinion of point of origin. (2) Logical fuel source at this point. (3) Logical heat source at this point. (b) Point of greatest burning intensity. (1) Determined by what method. (2) Logical fuel source at this point. (3) Logical heat source at this point. (c) Point of lowest burning. (1) Logical fuel source at this point. (2) Logical heat source at this point. (d) Path of fire travel. (1) From. (2) To. (3) Logical fuel source at this point. (4) Logical heat source at this point. (e) From logical fuel and heat sources established above, locate point of origin.	

COURSE OUTLINE	GUIDES
4. The cause analyzed. (a) Occupants opinion of how fire started. (b) Occupants description of materials at point of origin. (c) Firefighters, citizens and neighbors information. (d) Study of fuel and heat sources at point of origin including indications of. (1) Explosions. (2) Flash fires. (3) Extremely hot fires. (4) Electrical fires. (5) Heating appliance fires. (6) Incendiary fires. (7) Easily ignited fuels. (8) Heat sources. (e) Unusual conditions where heat source may be conveyed to fuel source. (f) Conclusion reached. (1) Original fuel. (2) Original heat source. (3) Cause of fire.	

COURSE OUTLINE	GUIDES

VII. Recognizing and Preserving Evidence of Arson.

A. Procedures for recognizing evidence of arson.

1. Observe general conditions at the scene of the fire.

(a) Upon approaching the fire observe.

(1) The elements.

(2) Persons and automobiles.

(3) Color of smoke and flame.

(4) Size of fire and speed at which it is traveling.

(b) Upon arriving at the fire observe.

(1) The number of separate fires.

a. Their intensity.

b. Rapidity of spread.

(2) Odors.

(3) Methods required to extinguish the flames.

2. Observing conditions at the time of the fire.

(a) Observe condition of the building.

(1) Any locked doors and windows.

COURSE OUTLINE	GUIDES
(2) Condition of doors, windows and locks. (b) Condition of owners, occupants and bystanders. (1) Observe dress and manner of persons at the fire. (2) Look for familiar faces. (c) Condition of contents. (1) Indications of removal of personal articles. (2) Indications of the removal of valuable merchandise. 3. Procedures for locating evidence of fire causes. (a) Look for indication of arson intent. (1) Multiple fires. (2) Odors. (3) Undue wood charring. (4) Uneven wood burning. (5) Holes made in walls and floors. (6) Inoperative sprinklers and fire doors. (7) Tracks, footprints and fingerprints. (8) Condition of heating equipment.	

COURSE OUTLINE	GUIDES
(9) Containers used for flammable liquids. (10) Residues of wax or paraffin. (11) Debris and salvage. (b) Look for arson materials and equipment. (1) Trailers between fires. (2) Candles. (3) Matches. (4) Chemicals. (5) Flammable liquids. (6) Rags, waste and paper. (7) Gas stoves. (8) Glass. (9) Bottles. (10) Unusual gadgets and timing devices. (11) Electrical equipment. B. Protecting and preserving evidence of arson. 1. Protect and guard evidence. 2. Identify, preserve, remove and safeguard evidence that cannot be left at the scene.	

COURSE OUTLINE	GUIDES
(a) Evidence collected should be properly marked, tagged, identified and preserved in clean containers. (b) Record names of all persons handling evidence. 3. Points on protecting and preserving evidence. (a) Use care in the application of hose streams. (b) Perform overhaul and salvage carefully. (Save partially burned papers, flammable liquid bottles, etc.) (c) Move evidence from the scene of the fire only when absolutely necessary. (d) Handle evidence as little as possible. (e) Do not allow evidence to be walked over and trampled out. (Protect discovered tire tracks, human footprints, etc.) (f) Install barricades around evidence and otherwise properly guard. (Rope off areas.) (g) Have a witness to all discoveries. (h) Record the time of day, date, location, and circumstances under which evidence was discovered. (i) Seal evidence in bottles and cans to preserve the materials and odors.	

COURSE OUTLINE	GUIDES
(j) Call the proper investigative authority to carry on with the evidence you have detected. (k) Have photographs taken at the scene of the fire when evidence must be removed. (l) If persons are included in photos, identify. VIII. Making the Building, Contents and Area Safe. A. Procedures for making the building safe. 1. Remove first the original cause of fire. 2. Shut off utilities as soon as possible - gas and electrical service. 3. Check hazardous processes. 4. Find and remove unsafe structural conditions. (a) Loose cornices. (b) Bulging walls. (c) Sagging floors. (d) Weakened roofs. 5. Check equipment before releasing to owner for public use. (a) Conveyors. (b) Hoists.	

COURSE OUTLINE	GUIDES
(c) Escalators. (d) Elevators. 6. If necessary, see that adequate guards are placed around premises. 7. Cover roofs, windows, doors and sky lights that are damaged or broken. B. Making the contents safe. 1. Remove absorbent materials. 2. Check for loose equipment and fixtures. (a) Shelving. (b) Stock. (c) Hazardous liquids. (d) Hazardous solids. (e) Overhead fixtures. (f) Suspended articles. C. Making the area safe. 1. Remove hazardous conditions, if possible. 2. Recommend removal of dangerous conditions - dangerous walls, open pits, etc. D. Restoring automatic sprinkler and standpipe systems.	

COURSE OUTLINE	GUIDES

1. Officers should be certain that the individual responsible for the protection of the building has reset the sprinkler system.

2. Officers should be certain that the standpipe system has been drained, if necessary, and that all valves have been closed and outlet caps replaced.

E. Deodorizing - while deodorizing is not normally a fire department responsibility, a knowledge of the problems of deodorizing often permit valuable assistance to be rendered by the fire department.

IX. Procedure for Releasing the Premises.

A. To the owner and occupants.

1. Advise about conditions.

2. Recommend necessary precautions.

B. Utilities.

1. Give full cooperation.

2. Recommend necessary precautions.

C. Other authorities.

1. Cooperate with law enforcement representatives.

2. Cooperate with city officials.

3. Notify proper authorities of suspicious fires.

COURSE OUTLINE	GUIDES
X. Obtaining Data for Official Report.	
NOTE: The following outline is submitted as a guide for making official fire reports. It may be used in its entirety, or those sections that apply to the particular situation.	
A. Proper fire reports can be of tremendous benefit to fire officials. They will often help.	
1. Determine the fire cause.	
2. Determine suspicious fires.	
3. Establish arson cases.	
4. Compare similar cases.	
5. Secure authoritative loss data.	
6. Adjust losses.	
7. Plan future comparable operations.	
8. Point out need for specific training.	
B. General information.	Salvage & Overhaul Practices, P. 115-121, Sample fire report
1. General description of building.	
2. General description of occupancy.	
3. Business name of building.	
4. Location.	
5. Date and time of fire.	
6. Weather.	

COURSE OUTLINE	GUIDES
C. Summary of fire loss. 1. Value of building. 2. Insurance carried on building. 3. Loss on building. 4. Value of contents. 5. Insurance carried on contents. 6. Loss on contents. 7. Extent of loss on exposed buildings and contents. 8. Source of information and value of building. D. Building invclved. 1. Age of building and date of its major repairs. 2. Size of building. 3. Exterior walls construction. 4. Construction and location of fire walls. 5. Interior finish. 6. Floor construction. 7. Ceiling construction. 8. Height of roof space. 9. Type of roof.	

COURSE OUTLINE	GUIDES
10. Roof supports.	
11. Roof deck.	
12. Roof covering.	
13. Roof attachments.	
14. Parapets.	
15. Previous fires.	
16. Name of building owner.	
17. Building or property exposed.	
E. Occupancy and contents.	
1. Name of occupant and principal use of building.	
2. Description and use of important areas.	
3. Contents of principal areas.	
4. Fire load because of contents.	
5. Value concentration of contents.	
F. Story of the fire.	
1. Date of fire and circumstances of discovery.	
2. How, when and by whom alarm was transmitted.	
3. Fire department personnel and equipment that responded to the fire.	

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4. Observations of firemen at time of arrival at fire.

5. Location of hydrants and apparatus used.

6. Where each company worked and equipment it manned.

7. Description of spread or extinguishment of fire.

8. Outside aid called and response.

9. Equipment needed and not available.

10. Interesting or unusual happenings.

11. Injuries and/or deaths.

12. Fuel and ignition source that caused fire.

13. Length of time fire was fought.

14. Total of hose and ladders used.

15. Number of gallons of water used to fight fire.

G. Factors influencing the spread of fire.

1. Factors favorable to the spread of fire.

2. Factors limiting the spread of fire.

3. Factors favorable to fire fighting.

COURSE OUTLINE	GUIDES
H. Structural behavior. 1. Estimate of temperature in building. 2. Evidence supporting temperature estimate. 3. Damage to structural parts from fire, heat, or water. 4. Types of construction or structural parts that withstood the fire with little or no damage. I. Conclusions and recommendations. 1. Lessons learned from this fire. (a) Evidence of poor construction. (b) Fire fighting activities that may have produced better results. 2. Recommendations to prevent recurrence of similar fires. J. Illustrations. 1. Photographs. 2. Block map showing fire fighting layouts.	